CHAPTER 6

PORTLAND:
Emergency Notification System

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The Advancing Community Policing Grant

Background

By the time the Advancing Community Policing (ACP) project began, the Portland Police Bureau had more than 10 years of experience in computerized desktop mapping. Mapping had become increasingly popular. Citizens were aware of and officers were using the Crime Analysis Management Information Network (CAMIN) as a tool to visualize crime. The idea that citizens could perform similar mapping functions via the Internet was formed during development of the CAMIN project.

Desktop mapping can effectively make selections on an electronic map and create a file, so it seemed logical to combine the power of desktop mapping with telephone communications. Making a selection from an electronic map and delivering a message to the telephones in that area would save lives and property.

Administrators, officers, and community members were brought together to select and implement the program and its individual components. Community involvement was critical.

Several previous incidents had highlighted the need for an emergency notification system. In one case, a storm caused severe flooding that necessitated the evacuation of nearby residents. In other

cases, an armed gunman held hostages in a downtown high-rise office building and another barricaded himself in an apartment complex. In all of these examples, an emergency notification system would have provided a more efficient and timely means of alerting area residents to the potential danger.

In 1990, the Portland Police Bureau adopted a Community Policing Transition Plan. The department realized that improving its technological abilities was critical to advancing community policing. Developing and using geographic information systems (GIS) technology as part of its community policing initiatives became part of the department's infrastructure. However, the growing popularity of electronic mapping within law enforcement meant more training would be needed, and it would have to be better coordinated within the bureau.

The Project

In 1997, the bureau applied for an ACP grant to continue building on its efforts with the installation of a "dial-and-deliver" GIS system. The proposed system would have a number of uses, including automated community reminders and the delivery of emergency automated telephone contact during a crisis situation. In addition, implementing the

dial-and-deliver system would continue to enhance the department's GIS infrastructure on which the calling system would be built. Specifically, the objectives were to:

➜ Implement a dial-and-deliver notification system (including the development of policies for its use, the selection and installation of components, and testing and going online with the system).

The department realized that improving its technological abilities was critical to advancing community policing.

➜ Evaluate the dial-and-deliver notification system to determine whether customers (both officers and citizens) find the system an effective and useful tool.

➜ Provide training on GIS technology at all bureau levels.

➜ Coordinate between the various GIS technologies to integrate all systems that use computerized mapping.

➜ Upgrade existing GIS technology by providing needed enhancements.

Before implementing the ACP project, officials had to research the various types of systems and equipment available. The Portland Police Bureau released a request for information (RFI) to all companies known to provide products or services in the emergency notification industry.

In response to the RFI, three companies provided demos and answered technical questions about their systems. Department officials learned there were two basic types of systems available: equipment and service based. Based on its prior research, the bureau realized that a service-based system would best suit its needs. Selecting a provider was time consuming, but critical to the project's success.

The Portland Police Bureau included members of the community in development of the GIS system. Two neighborhoods were eventually selected as test areas. A public information and media campaign was launched to inform the residents of Portland about the program, named Portland's Emergency Notification System (PENS). Brochures were sent to agencies and users who would be affected.

Establishing a system for making emergency phone calls using a computer involves breaking the process down into its major components: policy, procedure, closure routine, command involvement, location of equipment, support, citizen

involvement, media involvement, subscriber lists, and training.

Policy. The Police Bureau was concerned that system calls would become commonplace or even ignored if there were too many nonemergency messages. Therefore, the city council directed that the system be used only for notification involving threats to life and property. A phone call from PENS must be considered an emergency.

Procedure. The commander of each of Portland's five precincts is responsible for police operations within the precinct's jurisdiction. Only the commander can authorize activation of the emergency notification system within that precinct. Officers, specialty units, or outside bureaus (including the Fire Bureau) must obtain approval from the precinct commander to activate the system. The procedure for operating the system is outlined in a manual supplied to all precinct commanders.

Closure Routine. When the danger or threat has passed, a closure message can be sent to assure the citizens that the incident is over. This closure routine contacts the same people who originally were called and both informs them of the outcome and thanks them for their help. One officer stressed the importance of this callback component, believing that follow-up with residents is an integral part of community policing.

Command Involvement. Both precinct commanders and command staff were involved in the approval of policy and procedures as outlined in the training bulletin. Although the precinct commanders were the only authorized activators of the system, they could delegate authority at their discretion. Commanders must set the policy within their precincts.

Location of Equipment. The police information line unit was selected as the location for the equipment. The supervisor and staff both welcomed the program and took ownership of it. This unit is the contact point for citizens who need information on police-related matters. With six staff members and a supervisor, the unit both answers questions and refers citizens to the appropriate precinct, division, or unit. Officials believed members of this unit would feel more personally involved in the program because they maintained responsibility for the system. In addition, because of the group's small size, training was held in just one day, only hours after the system was installed.

The police information line is also the data entry point for all unlisted or unpublished phone numbers that are not supplied with commercially

DEMOGRAPHIC BACKGROUND

The Portland, Oregon metropolitan area is located in the northwestern corner of Oregon at the confluence of the Columbia and Willamette Rivers on the Oregon-Washington state border. Portland has a population of 529,121. The population is 75.5 percent white, 6.5 percent black, 6.8 percent Hispanic, 6.3 percent Asian, and 5.0 percent other.[*] The police department has 1,045 sworn and 312 nonsworn personnel. The Portland Police Association represents officers as a union.

[*] U.S. Census Bureau, 2000.

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prepared data. During the course of the grant, the city of Portland and the Police Bureau had no statutory right to access those numbers from the phone company, so the Police Bureau asked citizens to submit their phone numbers and addresses if they wanted to be added to the system.[1]

The service-based system allows for a remote system in the field for emergency notification. The Police Bureau has one mobile precinct online and a second on the way. The laptop computer can be taken into the mobile precinct and emergency notifications can be sent from the remote location. In addition to notification capabilities, the laptop has fully functional mapping that can be used in the mobile command center.

Support. PENS is built on the desktop mapping program the Police Bureau has been using for more than 12 years, which allows the Police Bureau to maximize return on its investment in programming and training. The Planning and Support Division is the support unit within the Police Bureau; the grant manager was assigned to this unit. The service provider handles technical support for the software supplied in the PENS program, the maintenance of map layers and data files, and the completion of changes or updates to the system via a phone line. The updates and upgrades are seamless. The service provider also

updates the unlisted numbers with numbers supplied to them by the Police Bureau.

Citizen Involvement. Portland has 96 neighborhood associations that cover virtually the entire city. The Police Bureau worked with the Office of Neighborhood Involvement to find neighborhoods that would be willing to participate in a test. Two neighborhood group leaders volunteered. Information was released to the local newspapers, and articles informed citizens that the tests would occur.

Through the mayor's office, Portland has a program called Neighbor Safe that provides a forum in which neighborhood residents can voice their concerns on local issues. The Neighbor Safe program mailed a package to each household within the city that included information about PENS, a phone number for more information, and a form on which citizens could submit their unlisted phone numbers.

Media Involvement. Media involvement and assistance in sharing information about PENS was important to the project as a way to distribute information and introduce citizens to the system, especially because the grant did not provide funding for a paid media campaign.

Subscriber Lists. PENS is capable of much more than the delivery of emergency messages. The

system can inform citizens about upcoming events and neighborhood meetings, as well as crime prevention tips and other information. One jurisdiction surveyed uses its system to contact the elderly on a daily basis. If there is no response, the operator is alerted to dispatch a car to the location. Another jurisdiction uses the system to notify banks and stores of counterfeit checks or money orders being passed.

Training. Coordination of the training is ongoing and an expansion is planned. The CAMIN project established a computer lab for training and the computer lab now provides training in additional areas, including advanced mapping and crime analysis. The lab is equipped with mapping and other complementary tools that are used by the entire Police Bureau.

Plans for the Future. The goal of implementing an emergency notification system has been met. The system is ongoing and fully functional. Although it will not replace officers in all instances, PENS will reduce the number of officers needed to evacuate citizens or inform them of danger. There is no question an emergency notification system can alert citizens and businesses faster and more efficiently than officers going door to door. The notification system should be enhanced in those areas that would benefit from its use,

including contact with the elderly, suspect alerts, fraud alerts, and callbacks.

Training in mapping as a way to display data for analysis and presentation must be continued, and training on all mapping programs is ongoing within the Portland Police Bureau. The bureau remains committed to training and supporting its members to provide the best service to the community.

Department Observations

Challenges

Many citizens with unlisted numbers are still not included in the database. Portland has a high proportion of unlisted numbers, but officials are currently working on this problem and are encouraged by a new law that allows cities to obtain those numbers for the purpose of emergency notification.

Technology has progressed greatly over the past few years, but it has not solved some of the most common problems. For example, TTY/TDD machines cannot be contacted at the same time hearing telephone calls are being made. TTY/TDD

calls must be made separately and to known phone numbers. The ideal system would identify a TTY/TDD machine and leave a message, but such technology is not available at this time.

Benefits

At the conclusion of the ACP grant, an evaluation of the implementation process and the system was completed and submitted with the final report to the COPS Office. The evaluation found that the PENS system can deliver messages to any segment of the community much faster than traditional means. During actual events within the city, as many as 2,000 messages were delivered in about 30 minutes, including up to 5 attempts to phone numbers that were not answered.

Another key benefit is the system's ability to deliver a closure message to the same segment of the community when an incident is concluded, informing citizens about an incident's outcome. This is critical because sharing information to gain the cooperation of citizens is a primary goal of community policing. Certainly, the community supports the concept of emergency notification. Even citizens with unlisted numbers have embraced the concept and supplied their numbers to the Police Bureau.

The Portland Police Bureau and the city of Portland have benefited greatly from this project and will strive to continue the progress that the ACP grant made possible.

Panel Commentary

The exposition of Portland's PENS system was outstanding. The Portland Police Bureau provided an analytical and historical summary of an impressive technological program that can serve as a model for other agencies. The cogent, comprehensive, and candid program assessment fully explains the development and implementation of a program that provokes commitment and inspires change.

The selection of a service-based versus an equipment-based system was a critical decision point. Too often, agencies allow technology to define the parameters of service delivery, instead of the other way around. This is the classic form-follows-function dynamic, which time and again has led to dissatisfaction, inefficiency, and obsolescence. By requiring a service-based program, Portland could tap into the CAMIN desktop mapping infrastructure in place. Nevertheless, successful integration of an outdialing system with desktop mapping by a large municipal police

agency remains rare. The specific program element of automated closure messaging is without precedent and it is very impressive.

The policy of making a closure call, particularly after a police incident in an area, demonstrates a commitment to communication with residents. This simple, considerate act will strengthen the department's relationship with residents and make residents feel even more fully that they are seen as important members of their neighborhood. Departments that do not yet have this technological capability can accomplish a similar result by purposefully investing a limited amount of time after a major incident to seek residents out, perhaps through neighborhood leadership, to explain what occurred.

The Portland Police Bureau is a recognized leader in community organization and involvement. The use of technology to create a community notification system positions the bureau to interact with its residents in a proactive way regarding a number of important issues. The Bureau has considered the interests of its residents by establishing the policy that this system will be used only in the case of an emergency. As the Bureau expands use of the system to nonemergency alerts, it will be important to go slowly and listen carefully to feedback, because people may have a lower tolerance for nonemergency calls.

Other departments considering this type of system will be keenly interested in Portland's experience. The panel hopes that the Portland Police Bureau will report specific information about its project, perhaps through a national law enforcement magazine. Other departments might be especially interested in the level to which residents subscribed, the various layers of neighborhood organization within the database so that different groups within the same area could be reached, and the changes the department implemented, if any, to reach residents who resisted computer-generated telephone calls.

It is noteworthy that the Portland Police Bureau developed a Community Policing Transition Plan as early as 1990 and that the plan identified GIS technologies as a seminal component of any credible transition. This reveals a relatively sophisticated understanding of community policing fairly early in the history of community policing programs. This case study validates the Portland Police Bureau's well-deserved national reputation for commitment to problem solving and progressive policing strategies.

This project demonstrates the power of a single strategic enhancement to a well-established and comprehensive community policing plan. The panel has seen other examples where a police department was uniquely positioned to take advantage of one-time funding for a strategic purpose because of extensive prior planning or community involvement. The Portland Police Bureau has capitalized on an already impressive ability to do computer-based GIS mapping for crime analysis. The panel would be interested to know what, if any, resistance or failure was experienced in the implementation of this system. These lessons will be as important as the program's successes to any agency attempting to duplicate this system, perhaps more important.

The panel finds it significant that the Portland Police Bureau can define its city as 96 separate neighborhoods, each of which has provided contact information for neighborhood leadership. This powerful capability demonstrates the extent to which the department has integrated itself into the fabric of the city. Cities that do not yet have this ability would likely find that establishing it not only improves their ability to solve problems, but also dramatically enhances the police department's position in the community.

Note

1. The Portland Police Bureau did not have access to unlisted phone numbers.